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ABSTRACT

The reliability, validity, and relationships of a Spanish language adaptation of Schaefer's Child's Report of Parental Behavior Inventory (CRPBI) was examined in a sample of 5,300 Puerto Rican adolescents. It was found that the CRPBI had had reliabilities averaging .78 and factor analyses indicated a three factor structure similar to Schaefer's previous work. Background variables, especially socioeconomic status (SES) were related to the CRPBI factors. Generally, higher SES went with higher acceptance and lower hostile psychological control. Children from large families were less accepted. The CRPBI factors predicted grades, especially among junior high school males. Background factors predicted college plans. (Authors)

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FAMILY BACKGROUND, PARENT-CHILD RELATIONSHIPS and ACADEMIC ACHIEVEMENT AMONG PUERTO RICAN JUNIOR and SENIOR HIGH SCHOOL STUDENTS

Report No. 4

Study of Factors
Affecting student achievement

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Abstract

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FAMILY BACKGROUND, PARENT-CHILD RELATIONSHIPS, and ACADEMIC ACHIEVEMENT AMONG PUERTO RICAN JUNIOR and SENIOR HIGH SCHOOL STUDENTS

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The present report deals with four related issues which are important in the fields of developmental and educational psychology. First an attempt is made to assess the reliability and validity of a Spanish adaptation of Schaefer's (1965) Child's Report of Parental Behavior Inventory (CRPBI) in a Spanish-speaking Puerto Rican Sample. The feasibility of the cross-cultural applicability of the CRPBI, a promising objective instrument measuring children's perceptions of the child rearing behavior of their parents is an important question since developmental psychology strives for universal generalizations (Renson,Schaefer, and Levy, in press). On a more substantive level the present report assesses the extent to which CRPNI scores are associated with family background variables, especially socioeconomic status (SES) measures, among Puerto Rican hgih school students. This research follows a well established research tradition which links parental attitutdes and behavior to socioeconomic variables (Baldwin,Kalhorn, and Breese,1945; Sears, Macoby, and Levin,1957).

In addition the present report focuses on the extent to which the CRPBI contributes to the prediction of academic achievement. Finally the combined contribution of family background variables and the CRPBI variables to the total variance of academic achievement variables is assessed. This latter question has especially important practical implications for school personnel and parents.

METHOD

Instruments. The CRPBI was translated and adapted to Puerto Rican culture by one of the authors (E.V.N.) a bi-lingual school psychologist native to Puerto Rico. A family background instrument developed by the authors was similarly translated and adapted.

Administration and Sample. The CRPBI and a series of other instruments including the family background questionnaire were group administered in the Spring of 1968 to roughly 5,300 students attending Junior and Senior high schools in the Bayamón Norte school district within the city of Bayamón, Puerto Rico. An attempt was made to include all the students attending private and public high schools in the district. About 80 per cent of the enrolled students were actually included, although the number of students answering each instrument varied somewhat. Non-response was almost exclusively a function of student absence from school on the days of group administration. Students from all nine high schools, Junior and Senior, public and private, in the district made up the roughly 5,300 students on which this analysis is made.

Analysis: The 36 CRPBI scales (18 for father and 18 for mother) were scored according to Schaefer's directions (Schaefer,1965). The mean Tryon (1957) reliability coefficient for the 36 scales was .78 and the coefficients

ranged from .64 to .92. While not outstanding, these levels indicate that the 36 scales had sufficient reliability and internal consistency to merit serious attention in their Spanish version.

Factor analyses were performed separately on the Mother scales and on the Father scales using a principal components method rotated to a varimax criterion. When three factors were extracted and rotated, the resulting factors were similar in content to those found by Renson, Schaefer and Levy (in press). These factors collectively accounted for 74 percent of the total variance in both the Mother scales analysis and in the Father scales analysis.

The first factor may be termed Acceptance, being composed of scales for Acceptance, Child-Centeredness, Possessiveness, Positive Involvement, Intrusiveness and Acceptance of Individuation. A second factor, Hostile Psychological Control was composed of the scales of Control through Guilt, Hostile Control, Control through Instilling Persistent Anxiety, Control through Withdrawal of Relationship, Rejection, Hostile Detachment, as well as Inconsistent Discipline, Control, and Enforcement. The third factor Autonomy was composed of the scales of Extreme Autonomy, Nonenforcement and lax Discipline.

Factor scores were constructed for each student on the foregoing three factors by taking the mean of an individual's scale scores on each of the scales composing the given factor. Each scale entered into one and only one factor score. Thus there were six factors for each student, three describing his mother's behavior and three describing his father's.

The 48 items of the background variable instrument were subjected to a principal component analysis separately for Junior and for Senior high school students. Twenty factors were extracted and rotated by both varimax and

oblique methods. On the basis of these results, 21 variables were selected to represent the larger set of 48 with one or two variables being chosen from each of the factors which made sense theoretically. In brief form these variables were as follows: mother's education, father's education, father's occupational prestige level, availability of food to eat at home, supervisory level of father's job, number of persons sleeping in student's bed, number of communication devices possessed by family (TV,Radio telephone, phonograph), general financial status of family, number of children in family, number of older brothers, number of older sisters, father's age, whether mother worked during student's first five years, number of years that father has worked for a big business organization, number of relatives present in neighborhood, whether a language other than Spanish was spoken in the home, extent to which father was at home during first seven years,number of different homes lived in,rural vs. urban origin of mother, Puerto Rican vs. other country origin of mother and number of jobs held by father.

Two measures of academic achievement were used, grade point average for the 1967-1968 academic year, and plans to attend college.

RESULTS

The first order correlations between the 21 background variables and the six CRPBI factor scores (three for each parent) were computed separately for males and females within the Junior high school sample and similarly for the Senior high school sample. When these correlations were averaged over the four groups (using the r to z transformation), eight of the 21 background variables showed average correlations of .09 or greater (significant at the .01 level). Of 126 average correlations (not presented here for reasons of space), 21 or about 17 percent were significant at the .01 level. The

maximum average correlation found was $\underline{r}$ = .16, which is relatively weak. Seven of the eight background variables which significantly associated with one or more of the six CRPBI factors were SES measures (mother's and father's education, father's occupational prestige,etc.) The remaining background variable with a significant effect on one or more CRPBI factor was number of children in the family.

The directions of the associations were quite consistent. Higher SES was generally associated with higher Acceptance by both parents, while lower SES was associated with higher Hostile Psychological Control by both parents. In only two cases out of 42 possibilities were there correlations significant at the .01 level between background variables and the CRPBI Autonomy factor. In both cases higher SES went with greater Autonomy.

For the one significant non-SES variable, number of children, correlations indicated that for both parents, children in large families reported lower parental Acceptance.

Multiple regression analyses were performed on the four sub-sample groups (male and female Junior and Senior high students) using the 21 background variables to predict each of the six CRPBI factors, one at a time. On the whole, not much of the variance in CRPBI factors could be accounted for by the family background variables used here. The range of variance accounted for was from 2 to 12 percent, with a mean of about 6.5 percent. Somewhat more of the variance could be accounted for among the Junior high school students, male or female, than among the Senior high school students(the mean variance accounted for was about 7 percent for JHS and 5.5 percent for SHS). The Autonomy factor scores were most poorly predicted (only 4.5 to 5 percent of the variance as contrasted with 6 to 8 percent for the other two CRPBI factors).

Finally the separate and joint effects of the CRPBI factors and the family background variables upon the dependent variables of grade point average and plans to attend college were examined. The effects the background variables and the CRPBI factors had on grades and on college plans are presented in Table 1. These effects are stated as percentages of variance accounted for from the multiple regression R^2s.

TABLE 1

Percent of Variance Accounted for in Grade Point Average and in Plans to Go to College Using 21 Family Background Variables and Six CRPBI Factors

Predicting	Junior High		Senior High	
	Males	Females	Males	Females
<u>Grades</u> from:				
Background	8%	8%	11%	11%
CRPBI factors	21	12	7	5
Both	23	16	17	17
<u>College Plans</u> from:				
Background	13	16	16	22
CRPBI factors	4	6	4	5
Both	16	17	18	24

In general, when predicting grades the CRPBI factors were more important than the background variables for the junior high school students, especially for the junior high school boys. This relationship was reversed for the senior high school students, where the background variables were more important than the CRPBI factors. As indicated by the joint predictions, these two sets of variables acted

fairly independently except for the junior high school males. This is indicated by the finding that the amount of variance in grade point average accounted for by the CRPBI factors and the background variables jointly was only slightly less than the sum of their independent contributions.

Using the college plans dependent variable, the background variables were uniformly more powerful than the CRPBI factors. This was especially true for the Senior high school girls. Again the two sets of variables were fairly independent of each other (except for Junior high school females).

For both grades and college plans a substantial 16 to 24 percent of the variance could be accounted for by the CRPBI factors and the family background variables acting jointly.

DISCUSSION

The present study indicates that when a translated adaptation of the CRPBI was used with a group of Puerto Rican adolescents it yielded meaningful and hence apparently valid results. Some weak relationships (about six percent of common variance) were obtained between the CRPBI factors and a comprehensive set of background variables. Parental education and father's occupational prestige were most powerfully related to the CRPBI factors. However, these relationships were not so powerful as to indicate that the CRPBI merely reflects socioeconomic differences. The CRPBI factors and the background variables both affected grade point averages and college plans (from 16 to 24 percent of predictable variance) and their effects were fairly independent. A

relatively powerful influence of the CRPBI factors on the grade point average of Junior high school boys indicates that for these Junior high boys their relationships with their parents were especially crucial to academic development.

The relatively modest size of the percents of accounted for variance indicate that the CRPBI factors are determined by many things other than family background as here measured, and that grades and college plans are affected by many things (such as intelligence, personality, attitudes) other than family background and parent-child relationships.

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